

What is claimed is:

1. A method for making a phytase comprising:
providing a nucleic acid derived from a bacteria encoding a polypeptide having a phytase activity;
5 expressing the nucleic acid in a yeast under conditions which allow expression of the enzyme in the yeast.
2. A method for making a phytase comprising:
providing a non-natural or synthetically generated nucleic acid encoding a polypeptide having a phytase activity;
10 expressing the nucleic acid in a yeast under conditions which allow expression of the enzyme in the yeast.
3. The method of claim 1 or claim 2, wherein the nucleic acid has a sequence as set forth in SEQ ID NO:1 or SEQ ID NO:9, or wherein the polypeptide has an amino acid sequence as set forth in SEQ ID NO:2 or SEQ ID NO:10.
- 15 4. A recombinantly generated phytase made by a method as set forth in claim 1 or claim 2.
5. A food or feed comprising a phytase made by a method as set forth in claim 1 or claim 2.
6. The method of claim 3, further comprising isolating the
20 expressed phytase.
7. The method of claim 3, wherein the nucleic acid is expressed in a cell lysate or equivalent.
8. The method of claim 3, wherein the nucleic acid is expressed in a cell.
- 25 9. The method of claim 8, wherein the cell is prokaryotic cell or a eukaryotic cell.
10. The method of claim 8, wherein the cell is a bacterial cell, a yeast cell, a plant cell, an insect cell, a fungal cell or an animal cell.

11. The method of claim 10, wherein the yeast cell is a *Saccharomyces* sp., a *Schwanniomyces* sp., a *Pichia* sp. yeast cell, a *Hansenula* sp. yeast cell, a *Candida* yeast cell or a *Torulopsis* sp. yeast cell.

12. The method of claim 11, wherein the yeast cell is a
5 *Saccharomyces cerevisiae*, a *Schizosaccharomyces pombe*, a *Schwanniomyces occidentalis*, a *Pichia pastoris* or a *Hansenula polymorpha*.

13. The method of claim 10, wherein the bacterial cell is a gram negative bacteria or a gram positive bacteria.

14. The method of claim 13, wherein the gram negative bacteria is
10 a *Pseudomonas* sp.

15. The method of claim 13, wherein the gram negative bacteria is a *Escherichia coli* or a *Pseudomonas fluorescens*.

16. The method of claim 13, wherein the gram positive bacteria is a *Streptomyces* sp., a *Lactobacillus* sp., a *Lactococcus* sp. or a *Bacillus* sp.

17. The method of claim 16, wherein gram positive bacteria is a
15 *Lactobacillus gasseri*, a *Lactococcus lactis*, a *Lactococcus cremoris* or a *Bacillus subtilis*.

18. The method of claim 10, wherein the fungal cell is an *Aspergillus* sp.

19. The method of claim 18, wherein the fungal cell is an
20 *Aspergillus terreus* or an *Aspergillus ficuum*.

20. The method of claim 1 or claim 2, wherein the nucleic acid comprises a cloning vehicle.

21. The method of claim 20, wherein the cloning vehicle comprises
25 a an expression cassette, a vector, a plasmid, a phage, a phagemid, a cosmid, a fosmid, a bacteriophage or an artificial chromosome.

22. The method of claim 1 or claim 2, wherein the polypeptide further comprises a signal peptide and the polypeptide is secreted by the cell.